



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. 20231
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/476,521	01/03/2000	Herbert Gropp	RUM212	7964

7590 06/05/2002
Horst M. Kasper
13 Forest Drive
Warren, NJ 07059

EXAMINER

LUONG, VINH

ART UNIT	PAPER NUMBER
----------	--------------

3682

DATE MAILED: 06/05/2002

23

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.
09/476,521

Applicant(s)
GROPP et al.

Examiner
Luong

Art Unit
3682



-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 3/29/02
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above, claim(s) 8 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-7 and 9-16 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claims _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 1/3/00 is/are a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☒ The proposed drawing correction filed on 2/27/02 is: a) ☐ approved b) ☒ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☒ Certified copies of the priority documents have been received in Application No. 09/016,597.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
*See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s). _____ 6) ☒ Other: *Exhibit*

Vinh T. Luong
Primary Examiner

Art Unit: 3682

1. The request filed on March 29, 2002 for a Continued Prosecution Application (CPA) under 37 CFR 1.53(d) based on parent Application No. 09/476,521 is acceptable and a CPA has been established. An action on the CPA follows.

2. The Amendment filed on February 27, 2002 with the certificate of mailing dated January 16, 2002 (Paper No. 17) has been entered.

3. The interlineations or cancellations made in the specification or amendments to the claims could lead to confusion and mistake during the examination, issue and printing processes. Accordingly, the portion of the specification or claims as identified below is required to be rewritten before passing the case to issue. See 37 CFR 1.125 and MPEP § 608.01(q).

All of the pending claims are required to be rewritten.

4. Claim 8 is withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected invention, there being no allowable generic or linking claim. Applicant timely traversed the restriction (election) requirement in Paper No. 10.

5. The information disclosure statement filed July 3, 2000 fails to comply with 37 CFR 1.98(a)(3) because it does not include a concise explanation of the relevance, as it is presently understood by the individual designated in 37 CFR 1.56(c) most knowledgeable about the content of the information, of each patent listed that is not in the English language. It has been placed in the application file, but the information referred to therein has not been considered. Applicant is advised that the date of any re-submission of any item of information contained in this information disclosure statement or the submission of any missing element(s) will be the date of submission for purposes of

Art Unit: 3682

determining compliance with the requirements based on the time of filing the statement, including all certification requirements for statements under 37 CFR 1.97(e). See MPEP § 609 ¶ C(1).

6. The listing of references in the specification (German printed patent document 196 40 872.5 on page 5) is not a proper information disclosure statement. 37 CFR 1.98(b) requires a list of all patents, publications, or other information submitted for consideration by the Office, and MPEP § 609 A(1) states, "the list may not be incorporated into the specification but must be submitted in a separate paper." Therefore, unless the references have been cited by the examiner on form PTO-892, they have not been considered.

7. The information disclosure statement filed on August 15, 2001 (journal articles G. Pursche, H. Gropp) which is incorporated into pages 31 and 32 of the Amendment filed on August 15, 2001 (Paper No. 15) fails to comply with 37 CFR 1.98(a)(1), which requires a list of all patents, publications, or other information submitted for consideration by the Office. It has been placed in the application file, but the information referred to therein has not been considered.

8. The proposed drawing correction and/or the proposed substitute sheets of drawings, filed on July 31, 2000 have been partially approved.

(A) New Fig. 4 has been disapproved because:

(a) new Fig. 4 introduces new matter such as the end piece 4 as now shown. The original Fig. 2 shows that the inner diameter of the pipe 1 is varied: (1) at the junction of the end piece 4 and the pipe 1 as shown by applicant's phantom line; and (2) at referential numeral 1 (see attached Exhibit). However, Fig. 4 shows that the inner diameter of the pipe 1 is constant. The

Art Unit: 3682

original disclosure does not convey the concept that the inner diameter of the pipe 1 is constant, thus, it is unsupported by the record as filed. *In re Anderson*, 176 U.S.P.Q. 331 (CCPA 1973); and

(b) new Fig. 4 is inconsistent with the description in Paper No. 9. The insertion on page 6, line 12 of the specification, states that the outer diameter of the end piece 4 is slightly larger than an inner diameter of the pipe 1. However, Fig. 4 shows that the outer diameter of the end piece 4 is equal to the inner diameter of the pipe 1.

(B) The corrected Fig. 3 has been disapproved since it introduces new matter. The original drawings do not show the bearing rings. The corrected Fig. 3 now shows the bearing 6 which is identical to the cam 3. The showing and description of a specific type of bearing within a full spectrum of possible bearings is considered under the present disclosure to be new matter. *Cf.*, *In re Smith*, 173 U.S.P.Q. 679 (CCPA 1972) and *Ex parte George*, 230 U.S.P.Q. 575, 578 (Bd. Pat. App. & Inter. 1986).

(C) The corrected Fig. 1 has been approved.

9. The proposed drawing correction and/or the proposed substitute sheets of drawings, filed on February 27, 2002 have been disapproved because:

(A) new Figs. 9-18 introduce new matters. For example:

(a) the size, shape, and/or location of the bearing rings 6 as now shown in Figs. 9-18 are unsupported by the record as filed. In fact, the original drawings do not show the bearing rings 6. The showing of a specific size, shape, and/or location of the bearing rings within a full spectrum of possible bearing rings is considered under the present disclosure to be new matter. *Cf.*, *In re Smith* and *Ex parte George, supra*; and

Art Unit: 3682

(b) the orientation of the cams 3 as now shown in Figs. 11 and 18 is unsupported by the record as filed. In fact, the original Fig. 3 shows that the cams 3 are oriented in the same direction. However, new Figs. 11 and 18 show that the cams 3 are oriented in different directions (some are pointed to the left and some are pointed to the right). The different orientations of the cams 3 introduce new matter; and

(B) the new drawings are inconsistent with the specification, e.g., the Brief Description of the Drawings in the specification does not describe new Figs. 9-18.

10. The original drawings are objected to because:

(a) the drawings should show the plane upon which a sectional view such as Fig. 1 is taken; and

(b) each part of the invention, such as, (1) the *second* compression joint, the *second* crystalline phosphate coating, the *third* compression joint, and the *third* crystalline phosphate coating in claims 9 and 10; and (2) the solid rod in claim 15 should be designated by a referential numeral or character.

Correction is required.

11. The original drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the claimed features, such as, (a) the bearing rings in claims, 1, 6, etc.; (b) the *third* crystalline phosphate coating in claims 9 and 10; and (c) the solid rod in claim 15 must be shown or the features canceled from the claims. No new matter should be entered.

Art Unit: 3682

The original drawings merely show: (a) the pipe 1 as described on page 6 of the specification; and (b) only two coatings (i.e., first and second coatings) 2 and 5 as described in the original specification.

12. The amendment filed February 23, 2000 is objected to under 35 U.S.C. 132 because it introduces new matter into the disclosure. 35 U.S.C. 132 states that no amendment shall introduce new matter into the disclosure of the invention. The added material which is not supported by the original disclosure is, *e.g.*, as follows:

(A) the insertion in line 9 on page 6 of the specification. The original disclosure does not convey the concept that the cam 3 shown in Fig. 1 has an opening diameter slightly smaller than an outer pipe diameter, thus, it is new matter. *In re Anderson, supra*;

(B) the insertion in line 12 on page 6 of the specification. The original disclosure does not convey the concept that the outer diameter of the end piece 4 is slightly larger than an inner diameter of the pipe 1, thus, it is new matter. *In re Anderson, supra*; and

(C) the insertions in lines 13 and 14 on page 6 of the specification. The original drawings do not show the bearing rings. The corrected Fig. 3 now shows the bearing 6 which is identical to the cam 3. The showing and description of a specific type of bearing within a full spectrum of possible bearings is considered under the present disclosure to be new matter. *Cf., In re Smith*, 173 U.S.P.Q. 679 (CCPA 1972) and *Ex parte George*, 230 U.S.P.Q. 575, 578 (Bd. Pat. App. & Inter. 1986).

Applicant is required to cancel the new matter in the reply to this Office action.

Art Unit: 3682

13. The *specification* is objected to as failing to provide proper antecedent basis for the claimed subject matter, such as, (a) "a *second* compression joint," "a *second* crystalline phosphate coating," "a *third* compression joint" and "a *third* crystalline phosphate coating" in claims 9 and 10; and (b) "an elongated part" in claim 10. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction is required.

14. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

15. Claims 9-15 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

New matter

Claims 9 and 10 now call for the *second* compression joint, the *second* crystalline phosphate coating, the *third* compression joint, and the *third* crystalline phosphate coating.

Although the original drawings (Figs. 1-3) show only two coatings 2 and 5 as described in the original specification, however, claims 9 and 10 now claim three coatings as evidenced by the term "a *third* crystalline phosphate coating." The third crystalline phosphate coating is unsupported by the record as filed.

Inadequate description

Claims 9 and 10 now call for the *second* compression joint, the *second* crystalline phosphate coating, the *third* compression joint, and the *third* crystalline phosphate coating. The original drawings (Figs. 1-3) show only two coatings 2 and 5 as described in the original specification. On

Art Unit: 3682

the filing date, it is unclear as to how applicant makes/uses the third crystalline phosphate coating as claimed.

Claim 15 calls for a solid rod. However, applicant's drawings show only a pipe as described on page 6 of the specification. It is unclear as to how applicant makes/uses the camshaft that has an elongated part being a solid rod as claimed.

16. Claims 1-7 and 9-16 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The term "compression joints *without* joining coating" in claims 1 and 9 is vague and indefinite since it is not clear what type of compression joints are without joining coating.

The recitation "conventional compression joints" in claim 16 is vague and indefinite since it is not clear what type of compression joints is considered to be "conventional."

It is unclear:

(A) which structures define the claimed elements, such as, the *third* compression joint, and the *third* crystalline phosphate coating in claims 9 and 10. Although the original drawings (Figs. 1-3) show only two coatings 2 and 5 as described in the original specification, however, claims 9 and 10 now claim three coatings as evidenced by the term "a *third* crystalline phosphate coating." Applicant is respectfully urged to identify each claimed element with reference to the drawings; and

Art Unit: 3682

(B) whether the term that appears at least twice, e.g., “compression joints” in claims 6 and 7 refers to the same or different things. See M.P.E.P. 2173.05(o). Applicant is respectfully urged to identify each claimed element with reference to the drawings.

The use of alternative expression “or” in claims 12 and 16, etc. renders said claims vague and indefinite.

17. Claims 1-7 and 9-16, as best understood, are rejected under 35 U.S.C. 102(a) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Seim *et al.* (Publication “*Erhöhung der Sicherheit gebauter . . .*” cited in EPO Search Report in the parent application).

35 USC 102(a)

Regarding claim 1, Seim teaches a built-up camshaft comprising a pipe coated by a joint coating on outer and inner cylindrical surfaces (*id.*, Table on page 289 and Fig. 12 on page 290) and having outer and inner pipe diameters; and having cam places, bearing ring places and pipe end places (*e.g.*, Figs. 1 and 2, page 284 and Fig. 5 page 286); cams formed as rings with outer and inner cylindrical flanges (Fig. 12) and provided with the joint coating on an inner cylindrical surface of the inner flange and having a cam opening diameter. The outer end pieces of Seim inherently have an outer diameter bigger than the inner pipe diameter so that its outer end can be slipped into the pipe and joined to the pipe.

Claim 1 and other claims below are anticipated by Seim since Seim’s camshaft inherently has the bearing rings and end pieces. In fact, the bearing rings and end pieces are notoriously conventional in the camshaft art (see, *e.g.*, US Patent No. 5,299,881 issued to Mettler-Friedli and references classified, *e.g.*, in Class 74, subclass 567, and Class 123, subclass 90.6 of the Office).

Art Unit: 3682

Without the bearing rings and end pieces, one would not be able to assemble or mount Seim's camshaft to other parts of the internal combustion engine, i.e., it would be inoperative for its intended purposes. See *In re Berg*, 46 U.S.P.Q.2d 1226 (CAFC 1998). In addition, it is well settled that the "wherein" or "whereby" clause that merely states inherent result of the limitations in the claim adds nothing to the claim's patentability or substance. *Texas Instruments Inc. v. International Trade Commission*, 26 U.S.P.Q.2d 1018 (CAFC 1993).

Regarding claim 2, the joint coating of Seim is a joint-stable conversion coating (Fig. 12 and the English summary on page 285).

Regarding claim 3, the inorganic and compound joint coatings of Seim inherently include a cement coating.

Regarding claim 4, at least one of the pipe, cams, end pieces and bearing rings are made of metal as seen by the drawing symbols for draftsmen in Fig. 12.

Regarding claim 5, the outer and inner cylindrical surfaces of the pipe is inherently partially mechanically machined. See, e.g., Fig. 10.

Regarding claims 6 and 7, Seim teaches a built-up camshaft comprising a pipe coated with a crystalline phosphate coating or a cement on an outer cylindrical surface and having outer and inner pipe diameters; cams and bearing rings (Fig. 9 and Table on page 289, and Fig. 12) having an inner diameter and end pieces having an outer diameter connected by means of compression joints. The cams, bearing rings and end pieces of Seim inherently have an outer diameter bigger than the inner pipe diameter so that they can be slipped into the pipe and joined to the pipe.

Regarding claim 9, Seim teaches a built-up camshaft comprising:

Art Unit: 3682

a pipe coated with a crystalline phosphate coating on an outer cylindrical surface and having an outer pipe diameter (Figs. 10 and 12);

a cam (Figs. 1 and 12) having an inner diameter larger than the outer pipe diameter and connected by means of a compression joint to the pipe and provided with the crystalline phosphate coating on surfaces being in contact with the pipe, wherein the crystalline phosphate coating prevents a tribocorrosion and increases load capacity as compared to compression joints and creates a stable joint between the pipe and the cam;

a bearing ring having an inner diameter larger than the outer pipe diameter and connected by means of a second compression joint to the pipe and provided with a second crystalline phosphate coating on surfaces being in contact with the pipe, wherein the crystalline phosphate coating prevents a tribocorrosion and increases load capacity as compared to compression joints without coating and creates a stable joint between the pipe and the bearing ring;

an end piece having an inner diameter larger than the inner pipe diameter and connected by means of a third compression joint to the pipe and provided with a third crystalline phosphate coating on surfaces being in contact with the pipe, wherein the crystalline phosphate coating prevents a tribocorrosion and increases load capacity as compared to compression joints without coating and creates a stable joint between the pipe and the end piece.

Note that Seim's camshaft inherently has the bearing rings and end pieces. Without the bearing rings and end pieces, one would not be able to mount Seim's camshaft to other parts of the internal combustion engine.

Regarding claim 10, Seim teaches a built-up camshaft comprising:

Art Unit: 3682

an elongated part (Figs. 1 and 12) having an outer cylindrical surface;

a cam (Figs. 1 and 12) connected by means of a longitudinal compression joint to the elongated part, wherein the cam is covered with a joint-stable surface coating (Fig. 12), and wherein the surface coating prevents a tribocorrosion and increases the load capacity as compared to compression joints;

a bearing ring connected by means of a second longitudinal compression joint to the elongated part, wherein the cam is covered with a second joint-stable surface coating, and wherein the surface coating prevents a tribocorrosion and increases the load capacity as compared to compression joints;

an end piece connected by means of a third longitudinal compression joint to the elongated part, wherein the cam is covered with a third joint-stable surface coating, and wherein the surface coating prevents a tribocorrosion and increases the load capacity as compared to compression joints.

Note that Seim's camshaft inherently has the bearing rings and end pieces. Without the bearing rings and end pieces, one would not be able to mount Seim's camshaft to other parts of the internal combustion engine.

Regarding claim 11, see regarding claim 3 above.

Regarding claim 12, see regarding claim 4 above. Further, note that the patentability of product-by-process is not dependent upon the process (cutting or non-cutting, milling or forging in massive or profiled form). M.P.E.P. 2113.

Art Unit: 3682

Regarding claim 13, the outer jacket face of the pipe (Figs. 1 and 12) inherently has a drawn quality. See also M.P.E.P. 2113 *supra*.

Regarding claim 14, the elongated part having an outer cylindrical surface is a pipe (Fig. 1).

Regarding claim 15, the elongated part having an outer cylindrical surface is a solid rod (Fig. 6).

Regarding claim 16, Seim teaches a built-up camshaft comprising a pipe or a solid rod, cams, bearing rings, end pieces, and other parts (Fig. 5), wherein the cams, the end pieces, the bearing rings, and the other parts are connected by means of longitudinal compression joints to the pipe or to the solid rod, wherein the parts to be connected are provided with a suitable surface coating, and wherein the surface coating prevents a tribocorrosion and increases the load capacity as compared to conventional compression joints. *Texas Instruments Inc. v. International Trade Commission, supra*.

35 USC 103(a)

Regarding claims 1-7 and 9-16, Seim teaches the invention substantially as claimed. See the rejection under 35 USC 102(a) above. However, Seim does not explicitly teach the dimensions of the cams, bearings, end pieces and pipe, etc. as claimed.

It is common knowledge in the art to change the dimensions of the cams, bearings, end pieces and pipe, etc. of Seim such that, e.g., the end pieces of Seim have an outer diameter bigger than the inner pipe diameter, etc. in order to slide the end pieces into the pipe and join the end pieces to the pipe. See *stare decisis* about the change in size/proportion cited in M.P.E.P. 2144.04.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to change the dimensions of the cams, bearings, end pieces and pipe, etc. of Seim such that,

Art Unit: 3682

e.g., the end pieces of Seim have an outer diameter bigger than the inner pipe diameter, etc. in order to slide the end pieces into the pipe and join the end pieces to the pipe as suggested by common knowledge in the art.

18. Claims 1-7 and 9-16, as best understood, are rejected under 35 U.S.C. 103(a) as being unpatentable over Seim in view of Mettler-Friedli (US Patent No. 5,299,881).

Regarding claims 1-7 and 9-16, Seim teaches the invention substantially as claimed. However, Seim does not explicitly teach the bearing rings and the end pieces. See page 23 of Paper No. 15.

Mettler-Friedli teaches the conventional bearing rings and the end pieces 2, 2a, 12, 13 in order to mount the camshaft to an internal combustion engine as seen in line 19 *et seq.*, column 5.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to form the conventional bearing rings and the end pieces on Seim's camshaft in order to mount Seim's camshaft to the internal combustion engine as suggested by Mettler-Friedli.

19. Applicant's arguments filed February 27, 2002 (Paper No. 17) have been fully considered but they are not persuasive.

1. With respect to the Supplemental Amendment filed on August 15, 2001, applicant is very welcome when the examiner uses the clean copy of the claims for examination.

2. With respect to the misnumbering of the claims, applicant is very welcome when the examiner renumbered the claims

3. With respect to claim 8, it has not been canceled, thus, it is withdrawn as set forth above.

4. With respect to the Information Disclosure Statements (IDS), applicant has not taken additional steps to comply with 37 CFR 1.98, thus, they have not been considered as set forth above.

Art Unit: 3682

5. With respect to the proposed drawing correction filed on July 31, 2000, applicant has not provided further effort to correct the remaining drawings, thus, the partially approval is maintained as set forth above.

6. With respect to new drawings, see the disapproval due to new matter above.

7. With respect to the amendment filed on February 23, 2000, applicant only amended the claims in the instant amendment, thus, the objectionable insertion has not been canceled. The objection is maintained as set forth above.

8. With respect to the antecedent basis for the claimed subject matter, e.g., "an elongated part" in claim 10, applicant contends that it is seen in the drawing figures. Although it may be seen in the drawings, nevertheless, the specification does not describe or have a referential numeral/character to designate it, thus, it lack antecedent basis in the specification.

9. With respect to 35 USC 112, first paragraph, applicant has not provided the additional drawing to show a solid rod. Therefore, the instant rejection is reiterated. Further, the examiner respectfully reminds applicant of the issue of new matter if applicant submits new drawing.

10. With respect to 35 USC 112, second paragraph, the previous rejection due to the term "stable joint" and lacking of antecedent basis is withdrawn in view of applicant's amendment. However, the alternative expression "or" is remained in claims 12 and 16, etc., thus, this ground of rejection is reiterated.

35 USC 102(a)

At the outset, applicant takes no issue, *inter alia*, that: (a) Seim publication already shows that the cams can be attached to the tubes; (b) the table in Seim article shows the torque is higher in case

Art Unit: 3682

of employing a shaft with a compound stable conversion layer coating, such as, MoS₂ oil paste or MoS₂ powder. However, applicant contends that Seim describes completely different joining methods for the construction of the camshafts and there is a lack of teaching as to an application of end pieces in Seim reference.

First, the examiner respectfully submits that the claims under examination are product-by-process claims. These claims are anticipated by Seim since Seim explicitly or implicitly teaches each and every claimed element of the applicant's product-by-process claims. It is well settled that the patentability of a product does not depend on its method of production in the instant case. *In re Thorpe*, 227 U.S.P.Q. 964, 966 (CAFC 1985); *In re Brown*, 173 U.S.P.Q. 685 (CCPA 1972); *In re Fessmann*, 180 U.S.P.Q. 324 (CCPA 1974); *Ex parte Edwards*, 231 U.S.P.Q. 981 (BPAI 1986); and M.P.E.P. 2113.

Second, regarding applicant's assertion that Seim does not teach the bearings and end pieces as required in claim 1, the examiner respectfully submits that it is well settled that each of the elements is not necessary to be described expressly in the reference. In fact, the claim is also anticipated if each of the elements is *inherently described* in the single reference. *Verdegaal Brothers, Inc. v. Union Oil Co.*, 2 U.S.P.Q.2d 1051, 1053 (CAFC 1987) and cases cited therein. Moreover, the single USC 102 reference needs not provide such explanation to anticipate when an artisan would know as evidenced by standard text books. *In re Opprecht*, 12 U.S.P.Q.2d 1235 (CAFC 1989).

In the instant case, the artisan would know that Seim's camshaft inherently has the bearing rings and end pieces. The bearing rings and end pieces are notoriously conventional in the camshaft art (see, e.g., US Patent No. 5,299,881 issued to Mettler-Friedli, Japanese Utility Model # 61-

Art Unit: 3682

166980, Japanese Utility Model # 8-93884, and other references classified, e.g., in Class 74, subclass 567 and Class 123, subclass 90.6 of the Office). Without the bearing rings and end pieces, one would not be able to assemble or mount Seim's camshaft to other parts of the internal combustion engine, i.e., Seim's camshaft would be inoperative for its intended purposes.

Third, applicant contends that the Invention method *as claimed* is clearly novel and patentable over Seim as seen on pages 18 and 19 of Paper No. 17. Nevertheless, contrary to applicant's remarks, applicant claims under examination call for an apparatus or a product, not a method. Thus, applicant's argument about method is unpersuasive. *In re Thorpe, supra*.

35 USC 103

Applicant submits that Mettler-Friedli describes the conventional camshaft comprising a hollow shaft, cams, bearing rings, and end pieces, but, applicant contends that Mettler does not teach the simple construction process according to the principle "joined and finished and coated, etc.

On the one hand, applicant admits that Seim teaches the claimed method of connection as evidenced by the statement "This connection is extremely durable as is shown on page 298 of the reference Seim et al." on page 21 of Paper No. 17.

On the other hand, as set forth above, the patentability of a product does not depend on its method of production in the instant case, thus, applicant's arguments about the method are unconvincing.

In addition, it is well-established that similar structures would behave similarly. *In re Merck & Co., Inc.*, 231 USPQ 375 (CAFC 1986). Since Seim teaches the coating of crystalline phosphate on a camshaft, therefore, Seim's camshaft is expected to behave in the same manner as applicant's

Art Unit: 3682

camshaft, i.e., the change of the conversion layer based on pressing of the press connection and forming of a micro form matching is necessary inherent and flown naturally from Seim's teaching of the same type of applicant's coating. *In re Best*, 195 USPQ 430, 433 (CCPA 1977) and M.P.E.P. 2112.

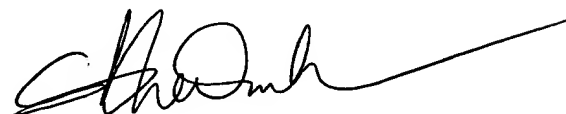
For the reasons stated above, the rejections based on Seim are maintained.

20. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner Luong whose telephone number is (703) 308-3221. The examiner can normally be reached on Monday-Thursday from 8:30 AM EST to 7:00 PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Bucci, can be reached on (703) 308-3668. The fax phone number for this Group is (703) 305-7687. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 308-1113.

Luong

June 3, 2002



Vinh T. Luong
Primary Examiner

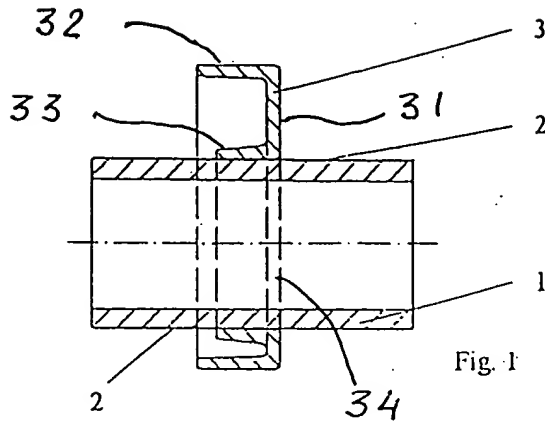


Fig. 1

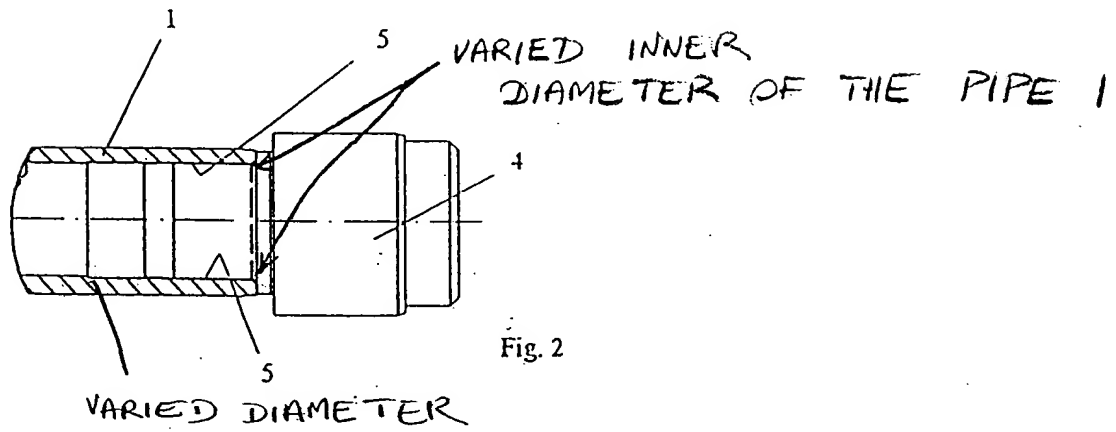


Fig. 2

Not
Approved
VL
10/20/00

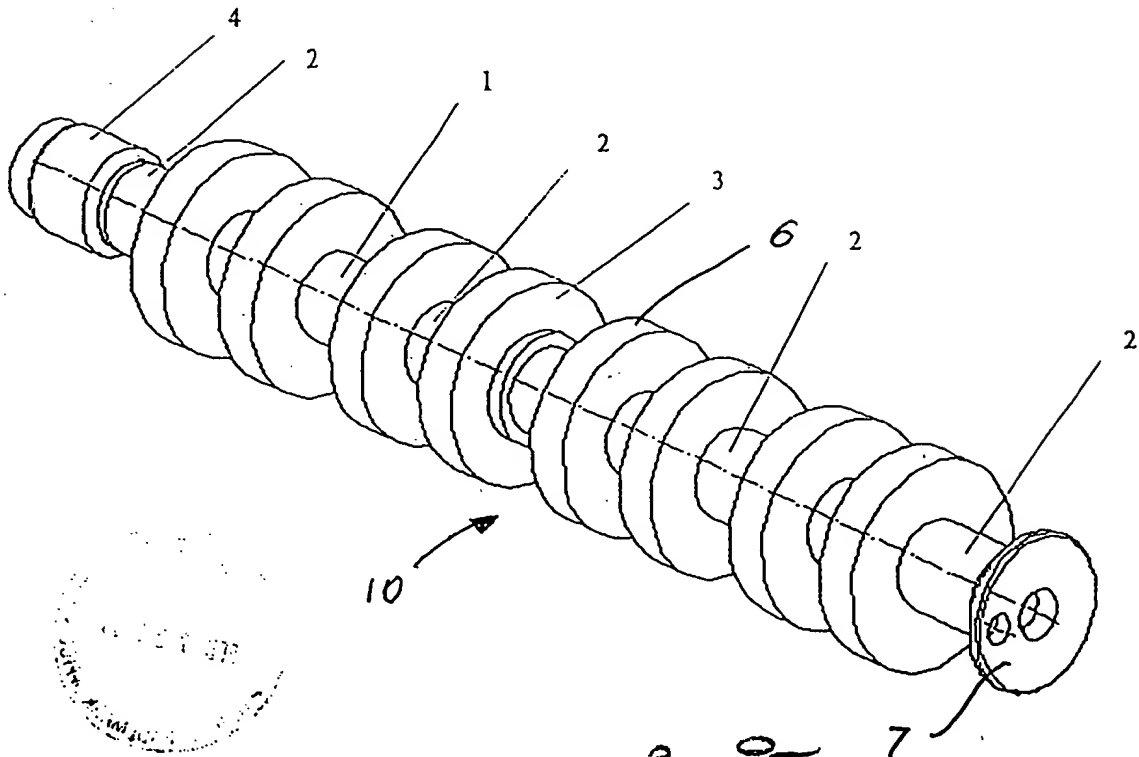


Fig. 3

EXHIBIT
(PAGE 1 OF 2)

Disapproved
VL
10/20/00

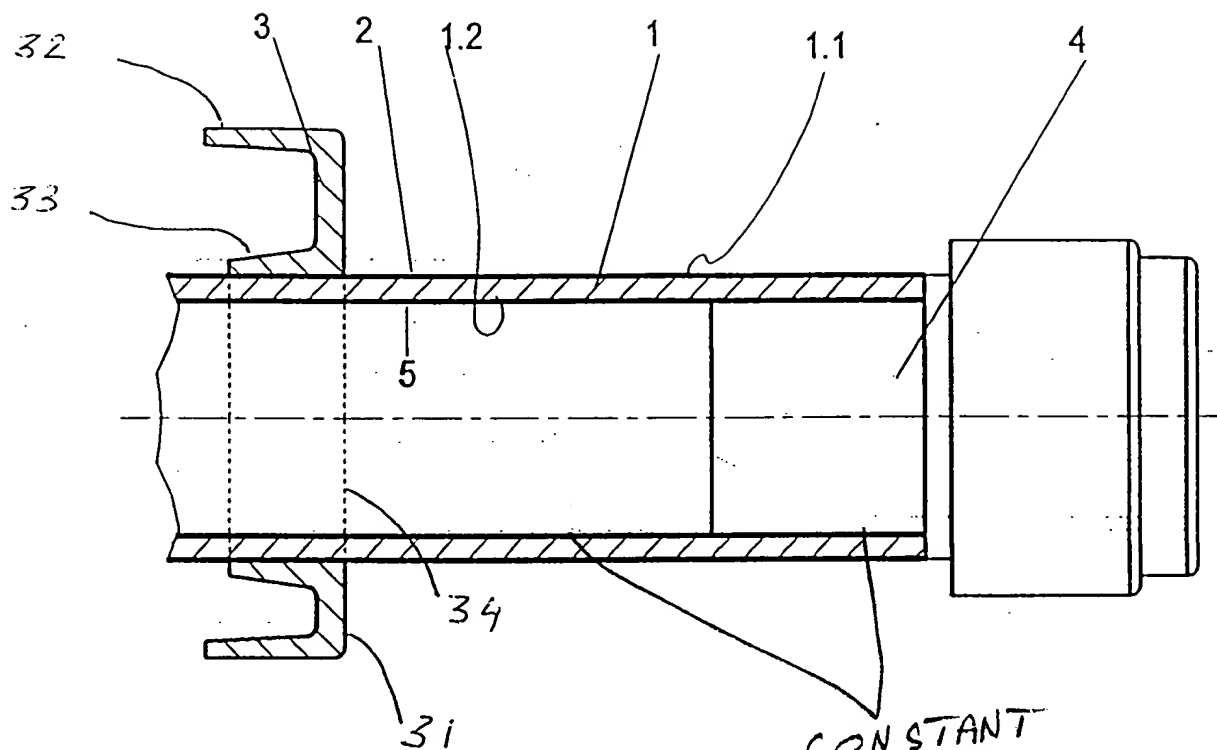


Fig. 4

CONSTANT
DIAMETER
(NEW MATTER)

EXHIBIT
(PAGE 2 OF 2)